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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
LEE, RICHARD J

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 03/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/881,965	Applicant(s) Kuzma
	Examiner Richard Lee	Art Unit 2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *10/19/01 and 12/19/01* .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1, 22-33, 35-39, and 41-49* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *1* is/are allowed.

6) ☒ Claim(s) *22-33, 35-39, and 41-49* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

1. The applicant's arguments from the amendments filed October 19, 2001 and December 19, 2001 have been noted and considered, but are deemed moot in view of the following new grounds of rejections.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 22-28, 31, 32, 35, 38, 39, and 41-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al (5,010,401) in view of Barberis et al of record (4,320,500) and Parrish et al (5,117,35).

Murakami et al discloses a picture coding and decoding apparatus as shown in Figures 24 and 26, and substantially the same apparatus method of transmitting real time data as claimed in claims 22, 23-28, 31, 32, 35, 38, 39, and 41-47, comprising substantially the same encoder for encoding the real time video data by determining the differences between the real time data and a transmit reference to produce differential data (i.e., 1-4, 13 of Figure 1 and 7, 13 of Figure 24); storing the differential data in a plurality of output buffers (i.e., 81, 82 of Figure 24), each output buffer created based upon one or more characteristics of a data communications channel (see column 17, lines 31-56 and column 19, lines 27-68); selecting one of the plurality of output buffers as a current transmit buffer (see column 17, lines 31-56 and column 19, lines 27-68); compressing the differential data prior to storing the differential data in one of the plurality of

output buffers (see 7 of Figure 24); a transmit reference buffer (see 13 of Figure 24) for storing a current transmit reference; compression circuitry (i.e., 5-7 of Figure 1 and 7 of Figure 24) coupled to the encoder and to the transmit reference buffer for producing compressed data based upon the current transmit reference and the encoded real time information; wherein the compressed data comprises a differential between the encoded real time information and the current transmit reference (see Figures 1 and 24); wherein the one or more characteristics of the data communications channel include transmission delay on the data communications channel (see column 16, lines 18-60, column 17, lines 31-56 and column 19, lines 27-68); the compressed data from the selected output buffer when used in conjunction with the previously stored transmit reference approximating a next frame expected by a receiving apparatus (see Figure 1, 24, and 26); and repeating the encoding, storing, selecting, and transmitting using the data from the current transmit buffer as the transmit reference (i.e., continuous processing of the video data within system of Figure 24).

Murakami et al does not particularly disclose, though, the followings:

(a) a plurality of dynamically created output buffers coupled to the compression circuitry for storing the compressed data, each dynamically created output buffer being created and configured based upon one or more characteristics of a communication channel to be used for transmitting the encoded real time information over a network; a network interface coupled to the plurality of output buffers, the network interface for interfacing with the network, the network interface determining the selected output buffer and transmitting real time data over the network

from the selected output buffer, wherein the selected output buffer contains compressed data which, when used in conjunction with the current transmit reference, accommodates the one or more characteristics of the data communications channel better than compressed data from at least another buffer/all other buffers of the plurality of output buffers; the network interface for selecting a selected output buffer of the plurality of output buffers by determining with reference to one or more predetermined coding strategies, whether compressed data from the selected output buffer is appropriate for transmission to a receiving mode as claimed in claims 22, 24-26, 35, 39, 41, 42, 44, and 46; and

(b) selecting one of the plurality of output buffers as a current transmit buffer by determining whether the differential data in a particular output buffer accommodates one or more characteristics of the network better than differential data in at least one other output buffer of the plurality of output buffers; the selected output buffer contains compressed data which accommodates one or more characteristics of the network better than compressed data in all other buffers of the plurality of output buffers; and transmitting differential data from the current transmit buffer over the network as claimed in claims 23 and 44.

Regarding (a) and (b), the particular selection of an output buffer based on characteristics of a network to provided a selected output buffer which accommodates one or more characteristics including transmission delays of the network better than at least one other or all other buffers to be transmitted onto a data communications channel of a network, in general, is old and well recognized in the art, as exemplified by Barberis et al (see column 4, lines 20-63). It

is considered obvious that such buffer selections based on network characteristics of Barberis et al may be provided in place of the output buffer configuration of Murakami et al so that network requirements are met. Further, the particular dynamically configuration of memories is old and well recognized in the art, as exemplified by Parrish et al (see column 4, line 51 to column 5, line 10, column 19, lines 33-49). As such, it is considered obvious that the memory buffers as provided in the modified Murakami et al may be dynamically configured as the specific type of memory allocation. Therefore, it would have been obvious to one of ordinary skill in the art, having the Murakami et al, Barberis et al, and Parrish et al references in front of him/her and the general knowledge of dynamically created output buffers and selected buffer output devices for network channel accommodations, would have had no difficulty in providing the particular selection of a dynamically created output buffer based on characteristics of a network to provide a selected output buffer which accommodates one or more characteristics including transmission delays of the network better than at least one other or all other buffers to be transmitted onto a data communications channel of a network as taught in the combination of Barberis et al and Parrish et al for the buffer control as shown in Figure 24 of Murakami et al for the same well known output buffer control for network interface operations purposes as claimed.

4. Claims 33 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Murakami et al, Barberis et al, and Parrish et al as applied to claims 22-28, 31, 32, 35, 38, 39, and 41-49 in the above paragraph (3), and further in view of Jeong of record (5,497,153).

The combination of Murakami et al, Barberis et al, and Parrish et al discloses substantially the same apparatus and method as above, but does not particularly disclose the encoded real-time information includes audio information and wherein the one or more predetermined coding strategies include minimizing artifacts as claimed in claims 33 and 36. However, Jeong discloses a system for variable length coding and variable length decoding digital data for compression transmission data as shown in Figure 5, and teaches the conventional audio real time encodings (see column 1, lines 20-25) as well as coding strategies minimizing artifacts before transmission (i.e., as provided by 52, 54 of Figure 5, and see column 5, line 16 to column 6, line 36). Therefore, it would have been obvious to one of ordinary skill in the art, having the Murakami et al, Barberis et al, Parrish et al, and Jeong references in front of him/her and the general knowledge of video/audio encoders with coding strategies, would have had no difficulty in providing the audio encoder with artifact minimization effects as shown in Figure 5 of Jeong for the video compression circuit as shown in Figure 24 of Murakami et al for the same well known purposes as claimed.

5. Claims 29, 30, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Murakami et al, Barberis et al, and Parrish et al as applied to claims 22-28; 31, 32, 35, 38, 39, and 41-49 in the above paragraph (3), and further in view of Khalil of record (5,343,465).

The combination of Murakami et al, Barberis et al, and Parrish et al discloses substantially the same apparatus and method as above, but does not particularly disclose wherein the one or more characteristics of the data communications channel include bandwidth availability and burstiness of traffic on the data communications channel, and allocating available bandwidth to achieve a higher frame rate as claimed in claims 29, 30, and 37. However, Khalil discloses a method and system for real time burstiness analysis of network traffic as shown in Figure 1 and 8, and teaches the conventional measuring and analysis of the burstiness of network traffic and allocation of available bandwidth to support specific services (see column 2, lines 27-66). Therefore, it would have been obvious to one of ordinary skill in the art, having the Murakami et al, Barberis et al, Parrish et al, and Khalil references in front of him/her and the general knowledge of network traffic conditions with bandwidth allocations, would have had no difficulty in providing the burstiness analysis of network traffic with coding strategies including the allocation of available bandwidth for the system as shown in Figure 24 of Murakami et al for the same well known purposes as claimed.

6. Claim 1 is allowed.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.

RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

2/27/02